



# pH FIELD & LAB INSTRUMENTS

## pH/mV/Temperature Benchtop with RS232 Capability

PHAT-210 temperature probe, included

PHA-77 third arm electrode holder, included

### PHB-212/213



Each unit comes with PHE-210 pH electrode, PHAT-210 temperature probe, PHA-77 electrode holder, cable, and 110 Vac to 12 Vdc power adaptor.

PHE-210 glass pH electrode, included



PHB-212 benchtop meter, shown smaller than actual size.

PHA-7, pH-7 buffer solution sold separately.

- ✓ PHB-212 and PHB-213 Resolution of 0.001 pH and 0.1°C with RS232 Link-Up
- ✓ Custom Microprocessor—Exclusive Microprocessor Provides Accuracy, Automatic Calibration, Prompts, Stability Indication, and Ease-of-Operation Meter
- ✓ Supplied Complete—PHB-212 and PHB-213 are Supplied with Lab-Grade pH Electrode, Temperature Probe, and Probe Holder
- ✓ Windows Compatible—with the PHB-200-SW Software, Download the Data to Your PC to Produce Tables, and Graphs

With a resolution selectable between 0.01 and 0.001 over the -2 to 16 pH range, the top-of-the-range PHB-212 and PHB-213 are designed for those users that need added accuracy. Both meters are supplied with opto-isolated RS232. The pH and temperature are displayed simultaneously and all pH measurements are automatically compensated for the temperature variance. With the temperature probe detached, manual temperature compensation is possible. PHB-213 also measures mV in the  $\pm 999.9$  mV range when used with ISEs and ORP electrodes. The large horizontal display shows both pH (or mV) and temperature at the same time. Calibration comes with prompts for the operator, thanks to the meter's sophisticated custom microprocessor. Calibration can be at one or two points aided by automatic buffer recognition at pH 4.00, 6.86, 7.00, 9.18 and 10.00. A hi-tech stability indicator ensures a proper calibration is carried out and that all subsequent measurements are accurate. A particular measurement can be memorized and recalled at a later time at will. The front label carries clear and concise information about how to operate the meters.



PHB-212 shown smaller than actual size.



## Specifications

### Range:

- PHB-212: -2.00 to 16.00 pH  
and -2.000 to 16.000 pH
- PHB-213: -2.00 to 16.00 pH  
and -2.000 to 16.000 pH
- PHB-213: ±999.9 mV (ISE and ORP)
- PHB-212: 0.0 to 100.0°C
- PHB-213: 0.0 to 100.0°C

### Resolution:

- PHB-212: 0.01/0.001 pH
- PHB-213: 0.01/0.001 pH
- PHB-213: 0.1 mV (ISE and ORP)
- PHB-212: 0.1°C
- PHB-213: 0.1°C

### Accuracy (@68°F/20°C):

- PHB-212: ±0.01/±0.002 pH
- PHB-213: ±0.01/±0.002 pH
- PHB-213: ±0.05% FS mV (ISE and ORP)
- PHB-212: ±0.5°C
- PHB-213: ±0.5°C

### Typical EMC:

- PHB-212: ±0.01 pH
- PHB-213: ±0.01 pH

### Deviation:

- PHB-213: ±0.6 mV
- PHB-212: ±0.5°C
- PHB-213: ±0.5°C

**pH Calibration:** Automatic 1 or 2 points with 5 memorized buffers (pH 4.00, 6.86, 7.00, 9.18, 10.00)

### Temperature Compensation:

Automatic (with probe PHAT-210) or manual from 0 to 100°C (32 to 212°F)

**Electrode:** PHE-210 pH electrode, combination, glass, interchangeable, BNC connector, 1 m (3.3') cable included

### Temperature Probe:

PHAT-210 with 1 m (3.3') cable included

**Input Impedance:** 10<sup>12</sup>Ω

**Power Supply:** 110 Vac to 12 Vdc adaptor included

**Environment:** 0 to 50°C (32 to 122°F); 95% RH

**Dimensions:** 240 L x 182 W x 74 mm D (9.4 x 7.2 x 2.9")  
**Weight:** 1.1 kg (2.4 lb)

To Order	
Model No.	Description
PHB-212	pH/Temperature benchtop meter
PHB-213	pH/mV/Temperature benchtop meter
PHAT-210	Replacement temperature probe
PHE-210	Replacement glass pH electrode
PHE-1411	Double junction, plastic body, gel-filled combination pH electrode with 1 m (3.3') cable
PHA-77	Third arm electrode holder
PHA-4	4.00 pH buffer solution 500 ml (1 pint) bottle
PHA-7	7.00 pH buffer solution 500 ml (1 pint) bottle
PHA-10	10.00 pH buffer solution 500 ml (1 pint) bottle
PHB-200PS	220 Vac to 12 Vdc adaptor with european plug
PHB-210PS	Replacement 110 Vac to 12 Vdc US adaptor
PHB-200-SW	Windows® compatible software for data logging and display
PHB-200-C	RS232 cable

Comes complete with a laboratory-grade glass pH electrode, BNC connector and 1 m (3.3') cable, stainless steel temperature probe, electrode holder, and 110 Vac to 12 Vdc power adaptor and operator's manual.

**Ordering Examples:** PHB-212, pH/temperature C benchtop meter, PHA-4, 4.00 buffer solution, PHA-7, 7.00 buffer solution.

PHB-213, pH/temperature benchtop meter, PHA-4, 4.00 buffer solution, PHA-7, 7.00 buffer solution.

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